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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,872	09/24/2003	Volker Wege	Mo6749N/LeA 33.358	5135
157	7590	03/25/2005	EXAMINER	
BAYER MATERIAL SCIENCE LLC			CHOI, LING SIU	
100 BAYER ROAD			ART UNIT	
PITTSBURGH, PA 15205			PAPER NUMBER	

1713

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/669,872

Applicant(s)

WEGE ET AL.

Examiner

Ling-Siu Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9, 11, 12, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 10 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/009,034.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/24/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This application is a continuation of 10/009,034, filed March 4, 2002, now US patent Number 6,649,723, which is a 371 of PCT/EP00/03926, filed May 2, 2000.
2. This Office Action is in response to the Preliminary Amendment filed September 24, 2003. Claims 1-8 were canceled and claims 9-15 have been added. Claims 9-15 are now pending.

### ***Claim Rejections - 35 USC § 102/103***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

**A person shall be entitled to a patent unless --**

**(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

**(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.**

5. Claims 9, 11-12, and 14-15 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Murayama et al. (US 4,911,966).

A composition comprising a polymer of vinylcyclohexane having

absolute $M_w$	100,000 to 450,000 g/mol
$M_w/M_n$	1 to 3
maximum melt viscosity (300°C; 1,000 sec <sup>-1</sup> )	1,000 Pa.s
wherein the vinylcyclohexane moiety result from the hydrogenation of aromatic units such that the hydrogenation rate of the aromatic unit is from 99% to 100%	

(summary of claim 9)

Murayama et al. disclose a vinyl cyclohexane polymer, wherein the vinyl cyclohexane polymer has  $M_w$  of 150,000;  $M_n$  of 80,000;  $M_w/M_n$  of 1.87 and wherein the vinyl cyclohexane polymer is obtained by hydrogenation of corresponding polystyrene with hydrogenation rate at least 80% (col. 5, lines 9-19; Preparative Example 2-Table 2). However, Murayama et al. are silent on the maximum melt viscosity. In view of facts that both weight average molecular weight and the molecular weight distribution fall into the claimed ranges and the process used to make the vinyl cyclohexane in the disclosure of Murayama et al. is substantially identical to one used in the present invention, the vinyl cyclohexane polymer would possess the claimed maximum melt viscosity because the properties of product mainly depends on the process used to make it and the maximum melt viscosity is closely related to the molecular weight and molecular weight distribution of the product. Since the PTO does not have proper

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means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

### ***Conclusion***

6. ClaimS 10 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Murayama et al. disclose an optical disk made of a non-crystalline thermoplastic resin comprising (a) 80-100 wt% of a vinyl cyclohexane polymer and (b) 0-20 wt% of a vinyl aromatic polymer, wherein the vinyl cyclohexane polymer has  $M_w$  of 150,000;  $M_n$  of 80,000;  $M_w/M_n$  of 1.87 and wherein the vinyl cyclohexane polymer is prepared by hydrogenation of corresponding polystyrene (abstract; Preparative Examples 1-3; Table 2). However, Murayama et al. do not teach or fairly suggest a mixture comprising high molecular weight of vinylcyclohexane polymer and low molecular weight of vinylcyclohexane polymer.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, David Wu, can be reach on 571-272-1114.

*G. Sui Choi*  
G-SUI CHOI  
EXAMINER

March 15, 2005